CHRIST
(DEEMED TO BE UNIVERSITY)
BANGALORE · INDIA

A Project Report on

Cosmic-Zoom

Submitted in partial fulfillment of the requirements for the degree of

BACHELOR OF TECHNOLOGY

in

Computer Science and Engineering

by

Ram Shankar Choudhary (1760357)

Under the Guidance of

Dr. Sandeep Kumar

and

Samhitha Kottamasu

Department Name

School of Engineering and Technology,

CHRIST (Deemed to be University),

Kumbalagudu, Bengaluru - 560 074

May-2021

School of Engineering and Technology

Department Name

CERTIFICATE

This is to certify that **Ram Shankar Choudhary** has successfully completed the project work entitled "**Cosmic-Zoom**" in partial fulfillment for the award of **Bachelor of Technology** in **Computer Science and Engineering** during the year **2020-2021**.

Dr. Sandeep Kumar
Associate Professor

Samhitha Kottamasu
Exhibition Coordinator

Dr. K Balachandran
Head of the Department

Dr. Iven Jose
Dean

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Department Name

BONAFIDE CERTIFICATE

It is to certify that this project titled "**Cosmic-Zoom**" is the bonafide work of

Name	Register Number	Department
Ram Shankar Choudhary	(1760357)	Computer Science & Engineering

Examiners [Name and Signature]

1.

2.

Name of the Candidate :

Register Number :

Date of Examination :

Internship Interim Status Report: Ram Shankar

Intern Name: Ram Shankar

Choudhary

USN: 1760357

College Name: CHRIST (Deemed to be University)

Guide Name: Teja Varma

Area of Internship: Data Engineering

Technology: Data visualization, BI, PySpark, R

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Authorized Signatory

Praveen Dalal
Director– People Functions

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Declaration

We, hereby declare that the project titled "**Cosmic-Zoom**" is a record of original project work undertaken for the award of the degree of **Bachelor of Technology** in **Department Name**. We have completed this study under the supervision of **Dr. Sandeep Kumar**, Guide Department and **Samhitha Kottamasu**, .

We also declare that this project report has not been submitted for the award of any degree, diploma, associate ship, fellowship or other title anywhere else. It has not been sent for any publication or presentation purpose.

Place: School of Engineering and Technology,
CHRIST (Deemed to be University),
Bengaluru

Date: 15-06-2021

Name	Register Number	Signature
Ram Shankar Choudhary	(1760357)	

Abstract

The use of internet has had many positive effects on education. It has provided us with the means to educate each and everyone without any discrimination, and any limitations (term relative only in terms of education, not the accessibilty limitation). I t overcomes both the limitations that students mostly have, which is time and the amount of space required for various books. This also benefits the teachers who have vast access to all the information and resources from the internet.

2020 was the year that challenged all the education systems to re-think the way students could be educated and also resulted in many educational conferences being cancelled. But this also led us to switching to new ideas/processes using internet as the backbone of all the work we do. My project also involved converting an offline exhibition that was held every year to an online variant.

This exhibition has been converted to an online variant wherein scientists, researchers, and scholars from various universities come in and explain about their research and the impact that it produces in real-world. The design and development of the website took nearly 7 months comprising various applications, technolgies, illustrators, animators...etc. For the wireframing and the prototype of the website Adobe XD was the most used application other than Figma and Framer X. The front-end of the website was build using ReactJs framework, using Tailwind-Css, Twin Macro and Styled-Components to style the website. The data is being populated using Google Sheets API as they wanted to quickly keep changing content and wanted that to be reflected in the website without the hassle of updating it constantly to a database like postgres or Mongo as that would also introduce a curve to learn for the non-technical people who were managing the exhibition. The website was put into production using Nginx using the on-site servers.

***Keywords*:** React.js, Tailwind, Nginx, Google Sheet API, Git

Contents

LIST OF FIGURES

LIST OF TABLES

GLOSSARY

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Item	Description
Adobe XD	Adobe XD is a vector-based user experience design tool for web apps and mobile apps, developed and published by Adobe Inc.
Figma	Figma is a vector graphics editor and prototyping tool.
Framer X	Framer X is another prototyping tool but with a lot of emphasis on motion design.
ReactJs	React is an open-source, front end, JavaScript library for building user interfaces or UI components.
TailwindCSS	A utility-first CSS framework packed with CSS classes.
API	**A**pplication **P**rogramming **I**nterface
Nginx	NginX is a web server that can also be used as a reverse proxy, load balancer, mail proxy and HTTP cache.

Chapter 1

INTRODUCTION

The techonology has evolved rapidly and provided us with various ways to communicate on a global scale and assess vast amopunt of information with a click. These benefits can be utilized by various sectors, and one of them is education which can can greatly be made more efficient by removing limitations of time, space and money. Students could watch a topic being thought any time of the day, anywhere and also maybe for free of cost. With the rise of pandemic, and with the restrictions to the people, the technology to teach people has gathered a lot of attention and all the educational institutions are implementing various ways using these technologies. This is the same for organizing various educational events which help students learn much more than their syllabus and provides them a way to essentially choose their career path. My project also is invovled in developing such a website that is used to educate students with a very interactive user experience, and also allows all the age groups be able to access the website with relative ease.

The purpose of this project was to implement an approach of user experience for a website design, that could highlight all the events conducted in the exhibition that also brought about the vision the client i.e Ajith wanted it to be, and also to develop this using the necessary technologies. While working on this project I mostly concentrated on revealing and understanding the concepts of UX design which include usability, visual design and human factors affecting the user experience. The vision that the client wanted wanted was for the website to look simple and yet elegant and to be accessible on any device without any hiccups with great user experience. With a lot of thinking, wireframing, and prototyping we came up with a design and a story that would be narrated by a host while show-casing the website. The process of designing and developing

was divided into various phases like wireframing, designing, prototyping, data gathering, developing front-end, connecting APIs, and the deploying to an in-house server.

1.1 Problem Formulation

Since this project was for an online exhibition, the main goal was for it to have a very nice user experience, and also to tell a story from the narrator's point of view during the event. My aim was to understand all the design aesthetics needed for the project, and for that I needed to clearly undestand the scope of this exhibition as this would help me imagine and approach the design as intended by the narrator of the website(i.e the host of the online exhibition). The user experience and and the libraries that will be used to complete this project would be a problem as everything would have to be customized as the client would want it to be.

1.2 Problem Identification

Clearly, the problem here would be designing a good user experience that bodes well for people of all ages and provides them with a intriguing experience to enjoy the whole exhibition, along with the narrator. User experience concentrates on how the overall design makes the user to feel. To create not just beautiful but also qualitative and well-worked design is why a user experience design is needed. To achieve positive user feelings during using a website, designers should understand users' goals, desires, fears, behaviors and ambitions. The problem during software development is that the technical approaches/practices are more popular than user-centric ones. Based on a huge number of surveys conducted by the groups with strong reputation in software production, this is a problem which leads to unsuccessful projects. The reason is the lack of attention to user inputs. In the website design the user experience is identified by not just usability alone. It's also impacted by a lot of design components that UX design covers. It includes usability, utility, design, human factors, accessibility, persuasiveness and others. All these factors while designing also afftect the way that a website has to be developed, because the layout needs to be as accurate to the design as possible.

1.3 Problem Statement & Objectives

The project is meant to design and develop a website that has a good user experience, that can be used by people of all ages without much effort. It should be responsive and visually pleasing pleasing to all kinds of user. This website if for an exhibition that is being converted to an online exhibit and needs a lot of design approaches to be used to make it like so.

1.4 Limitations

There are a few limitations regards to this project alone, as I am the only developer who would also design the user experience of the online exhibit and due to the team not being technaical various terminology issues arise, where I have to summarize what I mean, and also the lack of understanding of the domains of which the exhibit is conducted presents an issue by itself. Technically, there is one limitation I would like to highlight; which is not using a database but rather a google sheet api which is not a good approach, but it was done due to the limitation of team not being being technically adept and also because it would reduce my(developer's) burden to constantly keep updating data.

Chapter 2

RESEARCH METHODOLOGY

Research methodology is defined as a systematic study of defining a problem and formulating a hypothesis by collecting and analyzing data and information and making deductions and conclusions based on it. Research is often considered as a careful investigation or inquiry specifically through search for new facts in any branch of knowledge. Its main purpose is to inform action, to prove a theory, and contribute to developing knowledge in a field or study. In prior to developing any project or product,company firstly conducts a thorough research on demanded product its going to develop, whether or not it is scalable for all clients, how much will it benefit them; what are the advantages and shortcomings of existing systems One of main concern is how we can overcome them to create a more advanced, simple, interactive and easy-to-use system for both employers and employees. In my case, the problem lies in the design and the modeling of the website and how it needs to be implemented. This website is made to emulate an exhibition and has been converted to an online variant wherein scientists, researchers, and scholars from various universities come in and explain about their research and the impact that it produces in real-world.

Chapter 3

LITERATURE SURVEY AND REVIEW

Before developing the website for an exhibition, a lot of thought has to be put to how the website should look like, the amount of content that it should have, and how would the users be able to interact with various components present in the website. The user experience is a necessity here as ut directly relates to the satisfaction the users feel while browsing through the exhibition website. User experience design (UX) is a set of technologies which increase user satisfaction by improving usability and concepts related to interaction between human users and computers. User experience is a significant aspect in creating different kinds of products and services. The web is one of the most important fields in which a user experience design is applied. UX design is a broad sphere consisting of several components that are its constituents. UX design includes usability, human factors, accessibility and various kinds of design and system performance.

3.1 Literature Collection & Segregation

In the book, ”The UX Book: Process and guidelines for ensuring a quality user experience” by [1] Hartson et al, it mentions that the user user experience is the totality of the effect or effects felt by a user as a result of interaction with, and the usage context of, a system device, or product, including the influence of usability, usefulness, and emotional impact during interaction, and savoring the memory after interaction. The term “interaction with” is broad and embraces seeing, touching, and thinking about the

system or product, including admiring it and its presentation before any physical interaction. Simply said, user experience design is an umbrella term for any kind of activity that provides better experience for the user. UX concentrates on how the overall design makes the user to feel.

Before actually focusing on the user experience, we need to know how Online exhibition website have been implemented before and try to learn from them. [2] Kalfatovic et al in his book ”Creating a winning online exhibition: A guide for libraries, archives, and museums. American Library Association” mentions how important it is to segregate the items to be displayed and the exhibition itself, so as not to confuse the people when there is no exhibition but the item still remain to be showcased. [3] Lester P et al gives us insights on why online exhibitions are an alternative for the exhibitions conducted physically. It is a unique approach that takes in a lot of things into consideration but he says that the educator's would be devoid of the enthusiasm they feel in a physical exhibition. [4] Khoon et al in their article mention that web-based multimedia systems provide an exciting means and communication channel for information access and sharing, with immense potential in public education.

With this we also look at [5] Kelly et al guidelines for designing a good website. It is a list of points that should be considered when designing a web site. Many of these are points that should be considered when developing any web site, [6] JJ Garret's book ”The elements of user experience: user-centered design for the web and beyond” has vital refrences for web and interaction designers that can be taken over worked over to provide a website with excellent user experience.

3.2 Critical Review of Literature

Human-computer interaction is about human behavior and is used to drive system design, and human performance is the measurable outcome in using those systems. One major issue that we would need to address is the issue of accessibility. Accessibility has many forms, and its depth and breadth will be determined by the success of the “who are the clients?” process. Visitors to the site may have sight or hearing impairments and need a text or voice reader. In addition, they may not want to download images because their modem is too slow, use both the mouse and the keyboard..etc.

It is likely that we would have to come back to designing and then developing some aspects of the exhibition website that would consider both the accessibility and the human-interactivity. While designing we'll have to look at how useful the website is

for them, how much they can learn from it, will it be memorable to them, how effective is our content and the user experience, would they need some features that has not yet been thought of, and how effecient is the website to be able to run any kind of device, with any type of internet connectivity.

Chapter 4

ACTUAL WORK

In this project, I help design and build a web-site that is visually pleasing to all the age groups and has a great user experience. This website is designed to emulate how an offline exhibit would be like. A lot of work went into the design and the user experience of the website, and then more during web development. Various applications, and web-development technologies were utilized to create this online exhibit.

4.1 Software Requirements

Adobe XD Adobe XD is a vector-based digital design tool for websites and apps. It is used to create and collaborate on everything from prototypes to mockups to full designs. It is developed by Adobe and is available for Windows and macOS. It supports website, mobile, apps,etc to create wireframes and click-through prototypes.

Framer Framer is a tool similar to Adobe XD but can be used to design everything, it already has a lot of templates and designs to choose from. It is used to create high-fidelity prototypes with smart features in a very small amount of time. It has a veriety of components like drag and drop, layout tools, typography, building blocks and many many more.

React Js ReactJS is a open-source JavaScript library used to build reusable UI components. React is a library for building composable user interfaces. It encourages the creation of reusable UI components, which present data that changes over time. It is maintained by Facebook and a community of individual developers and companies. React can be used as a base in the development of single-page or mobile applications.

Tailwind CSS TailwindCSS is a utility-first CSS framework packed with CSS classes that can be composed to build any design, directly in React or HTML classes. With Tailwind, you style elements by applying pre-existing classes directly in React. Tailwind CSS is a utility-first CSS framework for rapidly building custom user interfaces. It is a cool way to write inline styling and achieve an awesome interface without writing a single line of our own vanilla CSS.

Frame Motion It is a library for React that is used to animate all the HTML elements or React components. It's a motion library which is open source used to create animations and gestures. Motion uses the Framer library(the tool that we used to prototype) to create animations. It can be used on any elemnt, whether its an input element, or only a single path of an SVG.

Google Sheet API Google sheets API provides us a way to Read, write, and format data in Sheets using the their API. This API has a lot of settings with which we can create beautiful and functional sheets within the code itself. Each spreadsheet has an id associated to it(you can also have a look at this id in the url when you open a google spreadsheet).

React Slick - used in creating the custom slider React slick is a react component that can be used to create custom carousel's based on various parameters and CSS tweaking. React-Slick by itself is a component made up of javascript and css which has a basic slider functionality that we have used in this project to create the main page by customizing it a lot.

4.2 Methodology for the Study

The purpose of creating a website for the online exhibition is to provide a medium for students, researchers, and scholars to gather and get to know about the research of various other scientists/researchers from various other fields. The first step to do that is to make the website have a very good user experience and that can be used by all age groups, and also make is simple yet elegant in the views of these users. This is done by a lot reserach of the way the various interactionms can be shown and also the best way to show details of a particular exhibit.

4.3 Experimental and or Analytical Work Completed in the Project

Using React Slick to create a custom slider

React slick is a react component that can be used to create custom carousel's based on various parameters and CSS tweaking. React-Slick by itself is a component made up of javascript and css which has a basic slider functionality that we have used in this project to create the main page by customizing it a lot. The reason to choose this project over any other was because of the simplicity and the accessibility to its parent code that is provided to us when we install it.

Google Sheets API

Google sheets API provides us a way to Read, write, and format data in Sheets using the their API. This API has a lot of settings with which we can create beautiful and functional sheets within the code itself. Each spreadsheet has an id associated to it(you can also have a look at this id in the url when you open a google spreadsheet). The main reason we choose this API was to read the cells of the spreadsheet, so that data from here can be populated in the exhibition website.

4.4 Analysis & Design

UX concentrates on how the overall design makes the user to feel. To create not just beautiful but also qualitative and well-worked design is why a user experience design is needed. To achieve positive user feelings during using a website. The problem in software development is that the technical practices are more popular than user-centric ones. Based on a huge number of surveys conducted by the groups with strong reputation in software production, this is a problem which leads to unsuccessful projects. The reason is the lack of attention to user inputs. In the website design the user experience is identified by not just usability alone. It includes usability, utility, design, human factors, accessibility, persuasiveness and others. In my project I have focused on three of them: usability, a visual design and the human factors, as the client wants the exhibit website to be used by people of all ages. The usablility of thw website concentrates on people, their satisfaction and how they use and understand things. People change very slowly, while technology changes quickly. The concept is not just about technology and ease of use.

With the analysis done on the type of users that may use our site, we build a wireframe that's simple and is also follows all the user experience standarads we had set ourselves. Below is a figure of a single component and with all the rules that were set to make the user experience better on all devices.

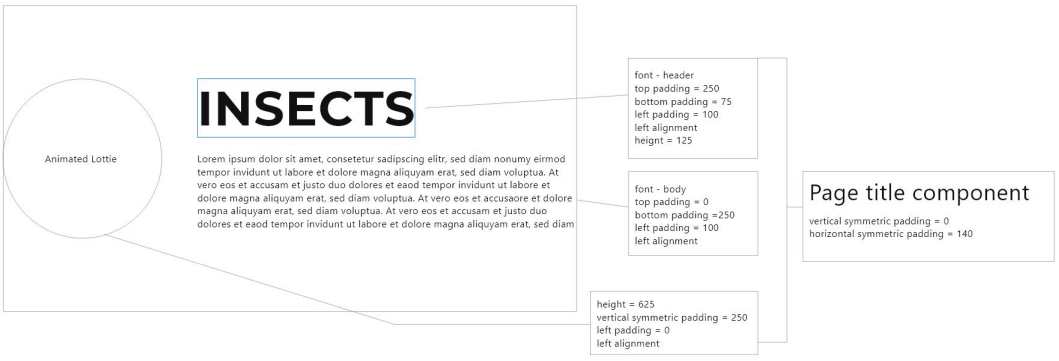

FIGURE 4.1: Wireframe a single title component

This wireframe design is then used as a point of reference to develop the website using web-technologies like React, TailwindCSS..etc and the below figure is a result of that.

FIGURE 4.2: Wireframe a single title component

4.5 Prototype & testing

While a prototype is a very early idea of what the website might look like, we already had a design system in place with various wireframes. color systems and prototypes that was later used to develop the website. These prototypes evolved from ideas to sketches to wireframes to working prototypes using various tools like Adobe XD, Figma, and FramerX. While designing the website, the main concern was the color theory behind each each page because all of them were different from each other and represented something quite different when viewed one by one and represented as one when seen

from the main page. The decision was made to use the colors of the logos and design another background image for each ”scales” page.
The alpha ersion of the website was tested by the institutions that participated in the exhibit first and various feedbacks were given, we also tested how fast does the user base of the website increase and what kind of load does it produce on the on-premises servers.

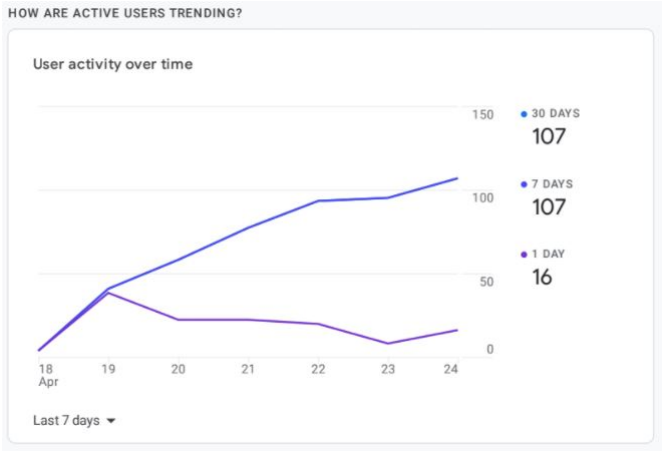

FIGURE 4.3: User trend of the website

While testing the load on the servers, we also tested various inputs by users to maximise the user experience, and captured various events like scrolls, clicks, sessions, how long they stayed on the site and much more.

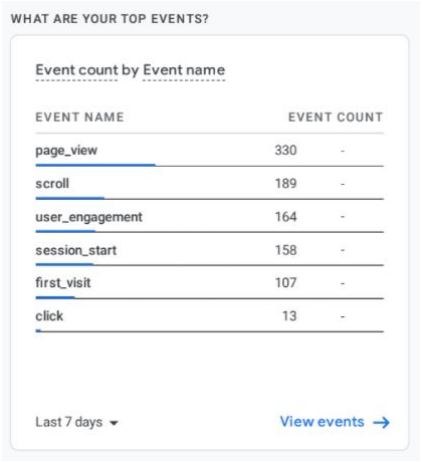

FIGURE 4.4: Various events triggered by users

Chapter 5

RESULTS, DISCUSSIONS AND CONCLUSIONS

As every project starts with a goal to establish, a problem to solve and to make existing projects better, they all lead to a result. These results helps us to determine whether the approach taken, job done, analysis and research conducted was correct and up to the mark or not. These results then help us to conclude what we have gained from all the hassle of researching, developing and testing.

5.1 Results & Analysis

The website, after several bug fizes and updates, feels very smooth and has good user experience as the client would want it. It is easily able to run both mobile phones and desktops. The following are the highlights of the website.
1. The user experience is simple and elegant such that people of any age will easily be able to go through the website.

2. The main page with the carousel is gesture friendly, it can be operated via gestures using mouse, hand gestures, touch pens..etc -
3. Mobile frindly even with a lot animations that have to load up. A lot of optimizations were done to the the gifs before exporting them so that it can easily be loaded on websites.
4. The website is well adapted and tested to handle real time data, with instant changes

in Google sheet data. The website automatically updates after a new refresh with the latest data from the google sheet data

5.1.1 Images

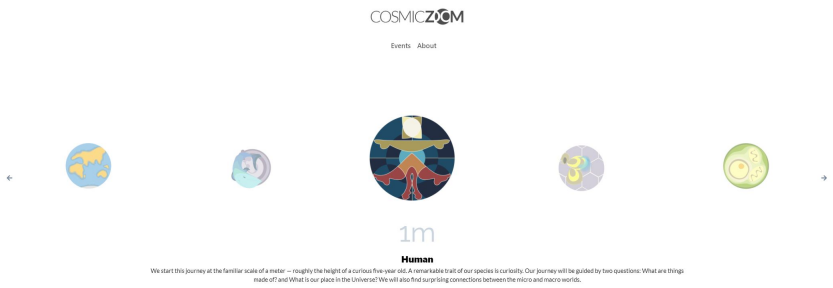

FIGURE 5.1: Main page from a wide screen

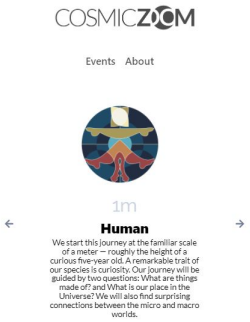

FIGURE 5.2: Main page from a mobile screen

FIGURE 5.3: Insects scale page from a wide screen

5.2 Comparative Study

There are a lot of websites that are used to showcase various educational exhibits, some of the most notable one's are First Ladies of United States and National Portrait Gallery. These were taken as an inspiration to design and develop the exhibition website, but make it more simple and user friendly. After the completion of the development process, here are a few aspects that stand out from other dashboards:

1. The application is made to look simple and is less straining to one's eye's when the all the focus is given only to the main content.
2. The main page has a custom made carousel that is accessible very easily both on large and smaller screens.
3. All the details come from a live google sheet that is continously being maintained for the latest and most accurate information and latest exhibits.

5.3 Discussions

This project opens up a lot of topics that can be discussed to educate common public, researchers, scholars, and students with various research and studies happening around them. It opens up the possibility to conduct online exhibitions with various other factors that can be included like quizzes, games, competitions..etc on the internet

5.4 Conclusions

The completeion of this project led to an online exhibition being called Cosmic-Zoom held by ICTS(International Centre for Theoretical Sciences), a centre of the Tata Institute of Fundamental Research which is a research institute which wanted to conduct an exhibition showcasing their research and scienctific discoveries in a storified manner through the website. This project led me to learn a lot of technoilogies and many Javascript libraries like react-router, styled-components, twin macro, framer motion and many many more. It also helped me look websites from a new perspective, of a designer as to how the user experience of a user can be increased and all components that are attached to this.

5.5 Scope for Future Work

1. Using a CDN to get the files and store in the user's cache is much better than loading it up at each reload 2. It is better to get data from a database rather than using Google Sheet API to get data from. The easy solution to this is to build an admin page that has access to the database, and has an editor like Quill.js to be able to edit all the data, which will update on the website too. 3. More image optimization has to be done to let the image lazy-load only after all the other UI components and text have successfully loaded. This'll make it faster to browse the site from one page to the other very quickly.

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Appendix A

CosmicZoom Website

A lot of effort was put into the the design and prototyping of the website to have a great user experience. Tools like Adobe XD, Framer were used to prototype how the website would look like and the amount of content it should contain. The figure below is one of wireframes for one of the exhibits.

Figure Insects page wireframe [Figure A.1]

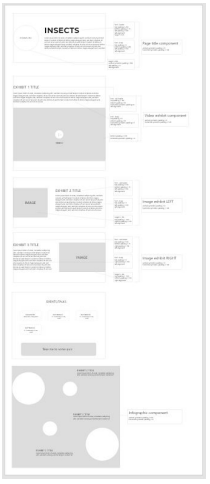

FIGURE A.1: Insects page wireframe

The wireframe above shows us one of the pages(internally called 'Insects scale page'), and the contents that it may have, which may also change based on later developments. This doesn't consist the navbar or the footer as that was designed during the development phase itself and more emphasis was given to the main body itself, each of the

sections within this is divided into contents, so that I can templatize it for all the other pages too. The components from the top are:
1, Title Component: It consists of the scale animation i.e the topic which this current exhibit contains information about, a title, and a paragraph of about 50-80 words describing why is this page releavnt to the exhbit.

2. Video Component: It consists of the title of the video, a paragraph containing some more detailed information to refer after watching the video, and then the video itself, All the details including the link of the video comes from the Google Sheet API and are mapped over these components.

3. Image Component: It's the same as video content, but there is an image rather than a video. It also gets all the content from the Google Sheet API.

4. Infographic Content: This component is basically a div container with padding and some media queries for the image placed inside to be responsive.

A.1 Components

Adobe XD Adobe XD is a vector-based digital design tool for websites and apps. It is used to create and collaborate on everything from prototypes to mockups to full designs. It is developed by Adobe and is available for Windows and macOS. It supports website, mobile, apps,etc to create wireframes and click-through prototypes.

Framer Framer is a tool similar to Adobe XD but can be used to design everything, it already has a lot of templates and designs to choose from. It is used to create high-fidelity prototypes with smart features in a very small amount of time. It has a veriety of components like drag and drop, layout tools, typography, building blocks and many many more.

React Js ReactJS is a open-source JavaScript library used to build reusable UI components. React is a library for building composable user interfaces. It encourages the creation of reusable UI components, which present data that changes over time. It is maintained by Facebook and a community of individual developers and companies. React can be used as a base in the development of single-page or mobile applications.

Tailwind CSS TailwindCSS is a utility-first CSS framework packed with CSS classes that can be composed to build any design, directly in React or HTML classes. With

Tailwind, you style elements by applying pre-existing classes directly in React. Tailwind CSS is a utility-first CSS framework for rapidly building custom user interfaces. It is a cool way to write inline styling and achieve an awesome interface without writing a single line of our own vanilla CSS.

Frame Motion It is a library for React that is used to animate all the HTML elements or React components. It's a motion library which is open source used to create animations and gestures. Motion uses the Framer library(the tool that we used to prototype) to create animations. It can be used on any elemnt, whether its an input element, or only a single path of an SVG.

Google Sheet API Google sheets API provides us a way to Read, write, and format data in Sheets using the their API. This API has a lot of settings with which we can create beautiful and functional sheets within the code itself. Each spreadsheet has an id associated to it(you can also have a look at this id in the url when you open a google spreadsheet).

React Slick - used in creating the custom slider React slick is a react component that can be used to create custom carousel's based on various parameters and CSS tweaking. React-Slick by itself is a component made up of javascript and css which has a basic slider functionality that we have used in this project to create the main page by customizing it a lot.

Appendix B

Custom Carousel

A customized carousel was built by me for the main poage of the exhibit to implement the design that we had created. The carousel was created using the help of a library called React-Slick, which is a slider library that also let's you customize it's parameter's through javascript, and CSS(Cascading Style Sheets). For the website to be as the client wanted i.e to be accessible by any age groups, a lot of thought went into how the inputs would affect the slider, and how it would scale in different devices. Below is an example of the Carousel component built using React with dummy data.

```
import React, { useState, Fragment } from "react";
import Slider from "react-slick";
import { FaArrowRight, FaArrowLeft } from "react-icons/fa";
import { Link } from "react-router-dom";
import Media from "react-media";

// import GifPlayer from "react-gif-player";

import "./carousel.css";

import cellGif from "../../lotties/cell/Comp 1.gif";

import insectGif from "../../lotties/insects/Comp 1_1.gif";

import humanPng from "../../lotties/human/Human-01.png";

const details = [
  {
    id: 1,
    gifName: "normal",
    size: "1",
    superscript: "",
    image: humanPng,
```

```
    name: "Human",
    desc: "lorem ipsum dolor ipsit",
    link: "/human",
  },
  {
    id: 2,
    gifName: "normal",
    size: "10",
    superscript: "-2",
    image: insectGif,
    name: "Insect",
    desc: "lorem ipsum dolor ipsit",
    link: "/insects",
  },
  {
    id: 3,
    gifName: "normal",
    size: "10",
    superscript: "-5",
    image: cellGif,
    name: "Cell",
    desc: "lorem ipsum dolor ipsit",
    link: "/cell",
  },
];

const Carousel = () => {
  const NextArrow = ({ onClick }) => {
    return (
      <div className="arrow next" onClick={onClick}>
        <FaArrowRight />
      </div>
    );
  };

  const PrevArrow = ({ onClick }) => {
    return (
      <div className="arrow prev" onClick={onClick}>
        <FaArrowLeft />
      </div>
    );
  };

  const [imageIndex, setImageIndex] = useState(0);

  const settingsBig = {
    infinite: true,
    lazyLoad: true,
    speed: 300,
    slidesToShow: 5,
    centerMode: true,
    centerPadding: 0,
    nextArrow: <NextArrow />,
    prevArrow: <PrevArrow />,
    beforeChange: (current, next) => setImageIndex(next),
```

```
  adaptiveHeight: true,
};
const settingsMedium = {
  infinite: true,
  lazyLoad: true,
  speed: 300,
  slidesToShow: 3,
  centerMode: true,
  centerPadding: 0,
  nextArrow: <NextArrow />,
  prevArrow: <PrevArrow />,
  beforeChange: (current, next) => setImageIndex(next),
  adaptiveHeight: true,
};
const settingsSmall = {
  infinite: true,
  lazyLoad: true,
  speed: 300,
  slidesToShow: 1,
  centerMode: true,
  centerPadding: 0,
  nextArrow: <NextArrow />,
  prevArrow: <PrevArrow />,
  beforeChange: (current, next) => setImageIndex(next),
  adaptiveHeight: true,
};

return (
  <div className="carousel-container">
    <section style={{ margin: 0, padding: 0 }}>
      <Slider {...settingsSmall}>
        {details.map((item, index) => (
          <div
            className={
              index === imageIndex
                ? "slide activeSlide"
                : "slide inactiveSlide"
            }
          >
            <Link to={item.link}>
              <img
                src={item.image}
                className={item.gifName === "normal" ? "normal" : "abnormal"}
                alt={item.image}
                key={index}
              />
            </Link>

            <div className="desc" style={{}}>
              <Link to={item.link}>
                <h2
                  class="size texts metric"
                  style={{ fontSize: "40px", color: "#cbd5e0" }}
                >
                  {item.size}
```

```
                    <sup>{item.superscript}</sup>m
                  </h2>

                  <h3
                    className="bash-name texts"
                    style={{ fontSize: "50px", fontWeight: "800" }}
                  >
                    {item.name}
                  </h3>
                </Link>
                <p
                  className="bash-description texts"
                  style={{
                    width: "650px",
                    paddingRight: "3rem",
                    paddingLeft: "3rem",
                    fontSize: " 30px",
                    lineHeight: "1.1",
                  }}
                >
                  {" "}
                  <span> {item.desc} </span>
                </p>
              </div>
            </div>
          ))}
        </Slider>
      </section>
      )
    </div>
  );
};

export default Carousel;
```

Below is the custom CSS used for the aove React component

```
@import "~slick-carousel/slick/slick.css";
@import "~slick-carousel/slick/slick-theme.css";

.carousel-container {
  width: 80%;
  margin: 10rem auto;
  height: 400px;
  margin-top: 10px;
}

.slick-slider {
  margin-top: 10px;
}
.slick-slide {
  height: 600px;
  display: flex !important;
```

```
  justify-content: center;
  align-items: center;
}

.Slider {
  height: 1800px;
}

.slide img {
  width: 20rem;
  margin: 0 auto;
}

.slide {
  transform: scale(0.38);
  transition: transform 300ms;
  opacity: 0.5;
  pointer-events: none;
}
.slide .desc {
  visibility: hidden;
}

.activeSlide {
  cursor: pointer;
  transform: scale(0.75);
  opacity: 1;
  transition: h3 5s ease-in 0.7s;
  pointer-events: unset;
}

.normal {
  /* transform: scale(0.38); */
}
.abnormal {
  transform: scale(1.1);
}

.normal {
  display: inline-block;

  transform: translateY(150px);
}
.abnormal {
  display: inline-block;

  transform: translateY(150px);
}

.activeSlide .desc {
  visibility: visible;
  transform: scale(1);
  text-align: center;
}
```

```
div.desc {
  /* background-color: #f0fff4; */
  margin-top: 150px;
  border-radius: 3px;
  padding: 5px;
  display: flex;
  flex-direction: column;
  justify-content: center;
  text-align: center;
  align-items: center;
}

p.click-notify {
  display: flex;
  justify-content: center;
  align-items: center;
  border-radius: 2.5px;
  font-size: 10px;
  font-weight: medium;
  color: #cbd5e0;
}
.arrow {
  background-color: #fff;
  position: absolute;
  cursor: pointer;
  z-index: 10;
}

.arrow svg {
  transition: color 300ms;
  color: #718096;
}

.arrow svg:hover {
  color: #3a5173;
}

.next {
  right: 0%;
  top: 50%;
}

.prev {
  left: 0%;
  top: 50%;
}

/* mobile */
@media only screen and (max-width: 768px) {
  h3.bash-name {
    font-size: clamp(0.5rem, -0.875rem + 6.333333vw, 1rem);
    text-align: center;
    font-size: 12px;
    font-weight: 600;
  }
```

```
  p.bash-description {
    font-size: clamp(0.5rem, -0.875rem + 6.333333vw, 1rem);
    text-align: center;
    font-size: 9px;
  }
  p.click-notify {
    text-align: center;
    font-size: 8px;
  }
}

@media only screen and (max-width: 600px) {
  .carousel-container {
    width: 80%;
    margin: 10rem auto;
    height: 300px;
    margin-top: 50px;
    margin-bottom: 100px;
  }

  .slick-slider {
    margin-top: 10px;
  }
  .slick-slide {
    height: 400px;
    display: flex !important;
    justify-content: center;
    align-items: center;
  }

  Slider {
    height: 1800px;
  }

  .slide img {
    width: 20rem;
    margin: 0 auto;
  }

  .slide {
    transform: scale(0.2);
    transition: transform 300ms;
    opacity: 0.5;
    pointer-events: none;
  }
  .slide .desc {
    visibility: hidden;
  }

  .activeSlide {
    cursor: pointer;
    transform: scale(0.45);
    opacity: 1;
    transition: h3 5s ease-in 0.7s;
    pointer-events: unset;
```

```
  }

  .activeSlide .desc {
    visibility: visible;
    transform: inset;
    text-align: center;
  }
  .metric {
    transform: scale(1.7);
    margin-top: 2rem;
    margin-bottom: 1rem;
  }

  h3.bash-name {
    font-size: clamp(0.5rem, -0.875rem + 6.333333vw, 1rem);
    text-align: center;
    font-size: 12px;
    font-weight: 600;
  }
  p.bash-description {
    font-size: clamp(0.5rem, -0.875rem + 6.333333vw, 1rem);
    text-align: center;
    height: 70vh;
    font-size: 9px;
  }
  p.click-notify {
    text-align: center;
    font-size: 8px;
  }
}
```

Since space is a factor while creating a report, here is a link to Custom Carousel Gist which has full data(only needs the gifs, but not shareable due to restrictions)

Index